

# TecBox - surveillance on the move

## BPS TecBox, mobile surveillance no cabling, no wires, no fuss & integrated GPS

### Features:

- Night time infra red for covert imaging applications
- High quality analog-digital converter for embedded miniature microphone
- Advanced video acquisition and buffering.
- Intelligent sensor incorporating radiant-heat-based motion detection
- Robust solid state hardware - no moving parts
- Scalable solid-state storage solutions capable of surviving harsh environments
- Audio video data recorded, stored, transmitted in secure proprietary format
- Custom designed robust anodised alloy casing, for both industrial and Hi tech environments
- Real time alerts via SMS to response monitor or cellphone
- GPS tracking with fall back to cellular mobile positioning system MPS
- Low noise, low quiescent current, and high efficiency power supplies
- Optional military grade fail safe rechargeable battery



## TecBox server

### Features:

- Quad Band wireless connectivity
- Secured on-line event handling
- Automated remote data handling response
- Real time data base interface
- Modular expansion to cope with fleet development



## Key benefits

- Opportunity to reduce carrier insurance costs
- Provides new surveillance capability for high value cargo in transit
- Self powered - the discreet TecBox records in virtual darkness or bright daylight
- Built in cellular technology transmits images and records sounds of any intruder in real time to your server or cell phone display... around the world...24/7...
- Self contained & compact, these units may be hard wired into a mains or external battery
- Can be activated via cell phone to access images in real time
- Requires no attendant viewing to monitor as the TecBox will alert you in real time



# TecBox - technology & applications

The BPS TecBox enables "surveillance on the move". TecBox can be installed, simply and temporarily, in vehicles, vessels, containers, or locations where it is not feasible or cost-effective to install a permanent CCTV system. It integrates within one unit, the functions of camera and microphone capture, intelligently controlled recording on non-volatile media, infra-red lighting, motion sensor triggering, and optionally wireless transmission and remote control.

The TecBox is tailored for remote use in freight vehicles and containers or any remote site where conventional CCTV can not be used due to lack of mains power or environmental issues.



The TecBox can also be used indoors, in homes, hotels, storerooms, workplaces, shops, luxury boats, caravans, public carriage or private vehicles, where security is an issue. For these situations, if required, it can be powered from the mains or an external 12 or 24 V DC supply, whilst still retaining at all times, an on-board battery supply.

The TecBox relies on a Passive Infra Red (PIR) motion sensor to detect human activity within its vicinity. Once triggered, TecBox will continue recording until there has been no activity for some time. If it is wireless enabled, it will evaluate the kind of activity seen and may submit a Wireless Alert. If it is wireless enabled it can also be instructed by the TecBox server or via SMS to start or stop recording, send images to the server, disregard alarm events, etc.

The motion sensor detects human activity at up to 10 M. The standard camera lens is a pinhole lens with a 90° angle, giving a semi-fisheye view to cover as much of the area as possible, and providing good depth of field.

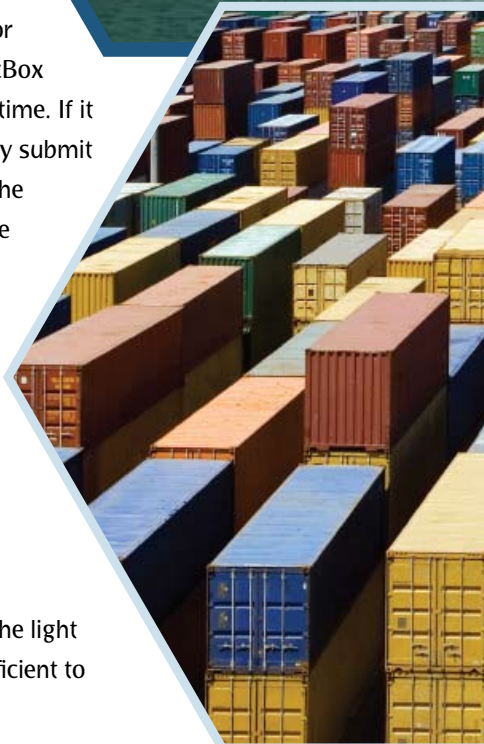
Audio Visual recordings and any other data saved by TecBox are stored on a built-in Secure Digital (SD) or MultiMedia Card (MMC) flash memory card.

The TecBox has a BPS built-in Infra-Red illumination source, which activates automatically if the light level falls below a certain limit. Combined with the high light sensitivity of the camera, it is sufficient to make the scene visible within a range of about 3 m in total darkness.

Without the IR illumination, the camera of the TecBox is sufficiently sensitive to show anything that could be seen with the naked eye.

When docked to a PC with a USB cable, the BPS Live Player program allows the user to view what the TecBox is currently seeing, providing a way of verifying that the camera is viewing the desired scene.

Each TecBox unit is uniquely identified by a two-part ID number, e.g. 5:678 is a unit of Model no.5, serial no. 678.



# TecBox - easy to use set-up

## Mission Preparation

### Set-Up

Connect TecBox to PC via USB.  
PC automatically indicates battery status.  
Open BPS wizard, select the mission-prepare option.  
Set activation delay time and enter monitoring/shipment data.

Check/adjust the TecBox on-board clock/calendar  
Save data to TecBox memory stick, confirm battery status and click finish  
Remove USB cable - TecBox is now ready to go.

### Installation

Transfer to container or site, mount TecBox where required.  
TecBox enters standby mode automatically.  
PIR sensor detects any movement after preprogrammed exit delay time.

Activity in front of TecBox is recorded to secure digital memory.  
Wireless TecBox sends real time SMS alert to any cell phone and streams images to server

### Mission Termination

Connect TecBox via USB to a PC.  
Open BPS wizard, and choose the mission terminate option.  
TecBox automatically downloads data from flash memory to PC.  
Playback audio video recordings with easy to use BPS player.

### Additional

TecBox "black box" capability if required records environmental conditions including humidity and temperature in addition to the high quality audio/video surveillance and GPS logistic data.

### Operating Parameters:

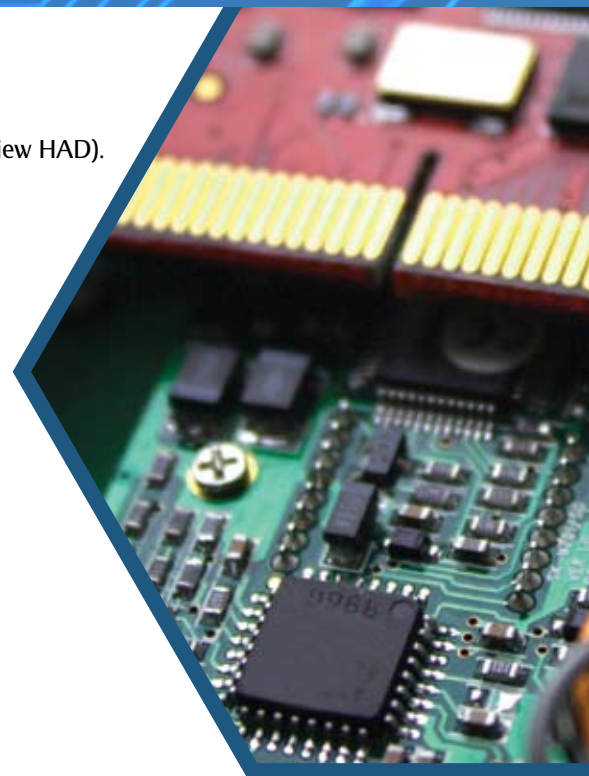
Mission standby duration 3 -60 days battery dependant. Active recording without overwriting is from 30 minutes upwards.

### Environmental:

Operating temperature: -10 - +55° C  
Storage temperature: -30 - +85° C



# TecBox - technical specification



## Imaging sensor

High-sensitivity 0.003 Lux rated panchromatic monochrome CCD sensor (Sony EXview HAD).

## Lens

4-element pinhole with 90° viewing angle.

## Illumination

Covert infrared illuminator, scene-controlled adaptive power adjustment.

## Video quality

736x576 pixels at motion-controlled adaptive frame rate.  
Video is compressed using a modified form of JPEG.  
Motion-dependant interlacing control.

## Thumbnail (Preview) quality

92x72 pixels, losslessly encoded.

## Maximum framerate

5 fps

## Audio quality

96 dB dynamic range at 14.7 ksps sampling rate, with automatic gain control.

## Motion sensor

Pyroelectric heat-motion sensor. Range up to 10 M.

## Recording medium

Secure Digital (SD) or MultiMedia Card (MMC) flash memory card.

## Standby Time

72hrs standard battery, can be optionally 60days plus.

## Recording time

Typical 5 hours per gigabyte of recording medium.

## Briefing and debriefing (Arming and Disarming)

Via USB port on a PC with ISM Wizard. USB 2.0 Full speed supported (up to 12 Mbit/s).

## Playback

On a PC with ISM Media Player. BPS provides software for conversion to common video format.

## Status feedback and user notification

Bi-colour indicators, buzzer alerts, internet server monitoring response centre and SMS.

## Power supply

4.1 V lithium-polymer backup battery. Sufficient for at least 30 minutes of recording in case of external power loss, or can be permanently connected to any DC supply (12/24 V).

## Indication and connectors

USB mini-B connector.  
2 LED indicators (hidden when mounted)  
Optional Flying leads for wiring to vehicle power supply or external on/off switch



# TecHead - surveillance on the move with BPS Technologies

## **TecHead** - wearable hands free security audio visual recording system

### **Unique all in one solid state camera, microphone and wireless system No Cabling, No Clunky Hard Disk, No Fuss**

Designed for total mobile surveillance protecting the public, your business and vulnerable staff from threats such as terrorism, vandalism, abuse or direct attack.

Compact, lightweight, comfortable to wear, providing high quality action recordings of sight and sound. Giving both support and reassurance to users. In the event of an incident, recorded data can be used to corroborate evidence and defend personnel. Whilst in a crisis, personnel can alert and inform colleagues of the live situation.

### **Key benefits**

- Mitigate false claims
- Protects your business and personnel at risk
- Discreet, easy to wear and operate
- Hands free, high quality audio/visual recorder
- Images date & time stamped
- Proprietary BPS audio/visual software
- Only authorised users allowed to play back recordings
- AGC automatic gain control for high quality audio playback
- Able to discern who said what and when (just as important as what is seen in case of malicious intent)
- Size and weight of typical PDA
- Robust completely solid state technology with no moving parts
- Withstands the most demanding environments faced by security & emergency services
- Optional head mounted system available for clear observation providing a deterrent effect
- WiFi & GSM options plus GPS locator
- Panic button mode activates recording, SMS alerts, stream images & GPS location via GPRS



# TecHead - mobile security monitoring

## TecHead - offers new security capabilities to:

Police Officers, security staff, public servants, hospital staff, check in staff, ticket inspectors, traffic wardens, care staff, driving instructors, lone workers, social workers, nightclub doorman etc. Reassure and protect your staff working alone in remote and vulnerable environments.

Now personnel finding themselves in a confrontational situation can immediately alert colleagues using a panic button. Allows co-workers or a monitoring centre to assess the threat, via video inputs, and assist immediately.

## Technical Specification:

### Imaging sensor

State-of-the-art high-performance Micron CMOS colour sensor.

### Lens

Customisable - from wide-angle pinhole to detail-rich magnification.

### Video quality

1.6 Megapixels at motion-controlled adaptive frame rate.

Extra pixel area supports anti-jitter stabilization.

Progressive scan – sharper moving images.

BPS proprietary video compression, maintaining high image quality.

### Audio quality

High quality audio, already well-known from other BPS surveillance products. Crystal-clear recordings with extended dynamic range.

### Plus

- WiFi on board, able to transmit images, sound and other data on the fly to a central server
- AV data recorded to integral flash card
- Recorded data may be easily uploaded without reader to PC via fast direct USB connection
- BPS low-power technology enables extended recording time
- Simple one-touch on/off control
- Convenient status display
- Optional belt-worn battery pack able to record continuously up to 8 hours.
- Shoulder strap, adjustable positioned unit & battery pack, integral wiring - no exposed wires
- Customised stylish casing, with customer's colour scheme and logo if desired
- Intuitive server-side software package from BPS to manage, store and recall recorded data from all customer mobile units



BPS are delighted to be selected and to offer TecHead as key technology to our partners in the SAMURAI project

BPS TecHead is an integral component of the EU sponsored Samurai project which aims to integrate a network of both fixed and wearable cameras and sensors to identify potential security threats in public places eg airports, shopping malls etc.



# TecBox - surveillance on the move

## TecBox

The BPS TecBox is designed for Logistics Operators, high value goods manufacturers and insurers.

### Is your high value cargo at risk during transit?

BPS TecBox provides live audio/visual and GPS tracking surveillance monitoring - notifying you instantly of any interference during shipping, thereby reducing carrier risk of theft smuggling or tampering.

BPS TecBox provides a cost effective solution, ...cut bottom line losses, downtime and disruption to your business due to interference or theft of cargo in transit.

Logistic Operators are under continuous threat of theft, fraud and illegal immigration. This cannot be effectively monitored or detected by use of conventional CCTV. BPS technology now offers a new ground breaking solution with the introduction of the TecBox.

Despite the application of sophisticated security measures by national carriers and authorities significant losses of high value occur through theft and misappropriation. This can include the theft of an entire container that has been illegally removed from a port or terminal area (often with the collusion of others) The stolen goods are often removed or cross loaded into other vehicles not far from the area of the port, then the empty container is abandoned.

Despite the use of customs and other security seals it is not unknown for "sealed" containers to be found empty or the cargo exchanged with worthless material. One of the main difficulties faced when investigating such losses is establishing when and where the losses actually occurred. The BPS TecBox now offers a solution. The BPS TecBox can be easily integrated into the logistic chain, giving a new layer of security surveillance monitoring for high value or sensitive cargo shipments.

TecBox can now provide an indication of the circumstances surrounding a loss. This includes real time SMS alerts via GSM, live image streaming via GPRS, location mapping information via GPS with fallback to cellular location MPS. Where data transmission is not possible the BPS TecBox will record audio video to solid state on-board memory for subsequent recovery playback.

Useful data includes date and time stamped audio/video images indicating where, when and who opened container doors. BPS TecBox is relatively low-cost, small semi-covert equipment capable of being mounted by non technical staff in or on a sea container, trailer or simply attached to the cargo without drilling or damaging the fabric of the container or trailer.

The BPS TecBox can be easily fixed or removed in under 1 minute by authorised non-technical staff for recovery and reuse. All data can be subsequently downloaded and archived using standard PDA or laptop with BPS software.



## BPS TecBox

In transit semi-covert audio/visual surveillance

- Digital video camera system
- No wires –true standalone
- Mobile, self powered
- Automatic sensor entry operation

## Features:

- Rechargeable lithium ion battery
- High quality audio & video
- PIR motion entry detector
- Infra-red night vision
- Date/time stamped events
- 3 to 60 days vigilance up to one hour recording

## In-Transit surveillance monitoring high value cargo

- Surveillance of high value cargo
- Alcohol
- Tobacco
- Consumer goods
- Pharmaceuticals
- Non contamination of cargo
- Illegal immigrants

## Enhancements

- Quad band wireless
- Real time alarm broadcast
- GPS location
- SMS – fallback location
- GPRS selected frame video
- Peek mode video
- Online diagnostic support
- Battery AC/DC options

## Summary

- Unique In-Transit surveillance
- Rugged, simple to use
- Interface to PC or laptop
- Stand-alone vigilance (60+Days)
- High quality AV recordings
- Easy quick mounting to cargo payload



# TecBox - site surveillance for remote and temporary situations

## TecBox

A totally mobile surveillance system where conventional CCTV is not suitable or viable. It has been specifically designed for remote situations eg construction sites, portacabins, large plant equipment, vehicles, luxury boats and empty property.

Our system does not require mains power or cabling yet provides high quality audio visual monitoring together with GPS tracking. It is ideal where there is a lack of mains power or where the temporary nature of the situation negates the use of conventional CCTV.

The motion/body heat sensor detects any intruder, alerting you via SMS and allowing you to see and hear the live situation enabling you to respond immediately.

### Remote site surveillance with TecBox

If you or your client is losing plant and equipment from your site or there is criminal activity associated with expensive capital equipment or materials then TecBox is for you. It will save expensive downtime and should reduce operating costs. It may also prove beneficial in enabling insurance cover or reducing premiums.

### Motor vehicles and caravan surveillance

If you are carrying valuable goods and don't want to unload during lunch. Short term surveillance is now a reality. Motor vehicles may carry or contain valuables which can be attractive to thieves. TecBox can be used to monitor and notify you of any incidence even if your vehicle is left unattended for a short time eg car parks, airports and hotels or other locations where it is convenient to leave but impossible, conventionally to ensure surveillance.

TecBox can also be used by taxi operators or emergency services vehicles to record and monitor journeys where drivers are potentially at risk.

### Reduced capital and installation costs

The majority of current security systems on the market are expensive, complex and require expert installation to set up.

The TecBox on the other hand, provides a cost-effective alternative. It is easy to install and can be set up in a few minutes, providing immediate surveillance. There is no need to engage the services of an expensive technician. Simply plug into a PC, set up parameters with the easy to use Wizard and TecBox becomes live. TecBox operates with its own built in battery, having 72 hours standby it can be increased to 6 months or alternatively connected to a mains power supply if this is available, for continuous monitoring.



Borthwick Pignon Solutions

# TecBox - site and temporary situation semi-covert audio visual surveillance

## BPS TecBox

In Transit semi-covert audio-visual surveillance

- Digital video camera system
- No wires –true standalone
- Mobile, self powered
- Automatic sensor entry operation

## Features:

- Rechargeable lithium ion battery
- High quality audio & video
- PIR motion entry detector
- Infra-red night vision
- Date/time stamped events
- 3 to 60 days vigilance up to one hour recording. Optional wiring to mains or solar power.

## Remote site surveillance monitoring capital equipment

- Surveillance of high value plant
- Site cabins
- Portacabins
- Security containers
- Site plant equipment & materials
- Property temporarily empty
- Boats & boating equipment

## Enhancements

- Quad band wireless
- Real time alarm broadcast
- GPS location
- SMS – fallback location
- GPRS selected frame video
- Peek mode video
- Online diagnostic support
- Battery AC/DC options



## Summary

- Unique portable surveillance
- Rugged, simple to use
- Interface to PC or laptop
- Stand-alone vigilance (60+Days)
- High quality AV recordings
- Easy quick mounting